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ORDINANCE NO. 957

AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF BUCKLIN, KANSAS, AMENDING CHAPTER XV, ARTICLE 2, SECTION 15-224 THROUGH 15-227, AND REPEALING ORDNANCE NO. 684, TO UPDATE AND CONFORM TO KANSAS ADMINISTRATIVE REGULATION 28-15-18 OF THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT REGARDING CROSS CONNECTIONS OF THE PUBLIC WATER SUPPLY.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF BUCKLIN, KANSAS.

Section 1: The City Code Article 15-224-15-227 are amended and Ordinance 684 is repealed.

Section 2: PURPOSE. The purpose of this ordinance is to protect the public water supply of the City of Bucklin, Kansas, from contamination due to backflow or back-siphonage from any cross connections to the public water supply; and to provide for the maintenance of a continuing effective cross connection control program. This program shall include regularly scheduled inspections to detect and eliminate current cross connections and to prevent future cross connections.

Section3: CROSS CONNECTIONS PROHIBITED. No person, company, corporation or institution shall establish or permit to be established or maintain or permit to be maintained, any cross connection whereby a private water supply, or any source of contamination may enter the regular public water supply of the City of Bucklin, Kansas, unless said source is approved by the City Council of the City of Bucklin, Kansas, and the Kansas Department of Health and Environment.

Section 4: PROTECTIVE BACKFLOW PREVENTERS REQUIRED. Approved devices to protect against backflow or back-siphonage shall be installed at all fixtures and equipment where backflow or back-siphonage may occur and where there is a hazard of contamination of the potable water supply system.

Section 5: INSPECTION. The City Superintendent of the City of Bucklin, Kansas or other designate of the City Council of the City of Bucklin, Kansas, shall have the right of entry into any building or premises in the City as frequently as necessary in order to ensure that plumbing has been installed in a manner as to prevent the possibility of contamination of the public water supply of the City of Bucklin, Kansas.

Section 6: PROTECTION FROM CONTAMINANTS. Pursuant to the authority of Home Rule Powers and K.S.A. 65-163a, the City of Bucklin, Kansas, may refuse to deliver water to any premises where a condition exists which might lead to the contamination of the public water and may continue to refuse to deliver water until the condition is corrected to the satisfaction of the City. In addition, the City may immediately terminate water service to premises where a backflow

or back-siphonage condition exists which may be hazardous to the health of customers served by this public water supply system of the City of Bucklin, Kansas.

Section 7: INCORPORATION BY REFERENCE. There is hereby incorporated by reference for the purpose of regulating cross connections between the public water supply and any sources of contamination the manual adopted by the Governing Body of the City of Bucklin, Kansas, known as *MANUAL OF REGULATIONS REGULATING BACKFLOW AND BACK-SIPHONAGE OF CONTAMINANTS DUE TO CROSS CONNECTIONS FROT HE CITY OF BUCKLIN, KANSAS, PUBLIC WATER SUPPLY.* No fewer than three copies of said manual shall be marked or stamped, *OFFICAL COPY AS ADOPTED BY ORDINANCE NO. 957,* and to which shall be attached a copy of this ordinance and filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.

Section 8. This ordinance shall take effect and be in force from and after passage and publication in the official city newspaper.

PASSED and APPROVED by the Governing Body this 27th day of April, 2020.

ATTEST:

Clay Sellard, Mayor

Rikki M. Hager, City Clerk

CITY OF BUCKLIN SEAL BUCKLIN, KANSAS (SEAL)

MANUAL OF REGULATIONS REGULATING BACKFLOW AND BACK-SIPHONAGE OF CONTAMINANTS DUE TO CROSS CONNECTIONS FOR THE CITY OF BUCKLIN, KANSAS, PUBLIC WATER SUPPLY

OFFICIAL COPY AS ADOPTED AND INCORPORATED BY REFERENCE BY ORDINANCE NO. 957

SECTION 1 – Definitions.

1. Agency shall mean the department of municipal or county government, rural water district or water purveyor invested with the responsibility for enforcement of this ordinance.
2. Air Gap shall mean the unobstructed vertical distance at least twice the diameter of the supply line and no less than one inch, through the free atmosphere between the lowest opening from any pipe or faucet supplying water to tank, plumbing fixture, or other device and the flood level rim of the receptacle.
3. Approved Device shall mean devices tested and accepted by a recognized testing laboratory approved by KDHE.
4. Authorized Representative shall mean any person designated by the Agency or District to administer this cross connection control regulation/ordinance.
5. Backflow shall mean the flow of water other than its intended flow of other substances, foreign liquids, gases, or used water unto the distribution system of a potable supply of water from any source other than its intended source. Back siphonage is one type of backflow.
6. Backflow Prevention Device shall mean any device designed to prevent backflow into the public water supply system.
7. Back-siphoning shall mean the flowing back of contaminated or polluted substances from a plumbing fixture or any vessel or source into the potable supply system due to negative pressure in the system.
8. Consumer shall mean any individual, firm, partnership, corporation, or agency receiving water from the Agency or District.
9. Consumer's Water System shall mean all system piping and all appurtenances beyond the Agency or District's service water meter of the public water supply system.
10. Contaminant shall mean any substance that upon entering the potable water supply would render it a danger to the health or life of the consumer or otherwise cause an aesthetic deterioration, color, taste, or odor problem.
11. Cross Connection shall mean any physical connection or arrangement between two (2) otherwise separate piping systems, one of which contains potable water of the public water supply system, and the second, water or any substance of unknown or questionable safety whereby there may be backflow from the second system to the public water supply system or its associated components of they system.

12. Double Check Valve Assembly shall mean any devices consisting of two (2) internally loaded soft seated check valves with positive shut-off valves on both upstream and downstream ends, and properly located test ports.
13. Dual Check Valve shall mean any device consisting of two (2) internally loaded soft seated check valves which do not contain test ports and is acceptable for use only at the meter of residential customers.
14. Degree of Hazard shall mean an evaluation of the potential risk to risk to public health and adverse effect for the hazard upon anyone using the water.
15. Free Water Surface shall mean any water surface of atmospheric pressure.
16. Flood level Rim shall mean the edge of the receptacle from which water overflows.
17. Frost Proof Closet shall mean any hopper with no water in the bowl and with the trap and water suppl control located below the frost line.
18. Plumbing shall mean the practice, materials and fixtures used in the installation, maintenance, extension, and alteration of all piping fixtures, appliances and appurtenances.
19. Pollution shall mean the presence of any foreign substance organic, inorganic, or biological in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health, but which does adversely affect the water.
20. Public Water Supply System shall mean any portion of the Agency's water system which shall include but not be limited to all service pipes, distribution piping, storage structures, treatment facilities, pumping equipment or appurtenances, including the water meters of the system.
21. Reduced Pressure Zone Backflow Prevention Device (RPZ) shall mean any assembly of two (2) independently acting soft seated approved check valves together with a hydraulically operating mechanically independent differential pressure relief valve located between the check valves and at the same time below the first check valve. The unit shall contain properly located test cocks and resilient seated shut-off valves at each end of the assembly, to be approved these assemblies must be accessible for inspection and testing an be installed in an above ground location where no part of the assembly will be submerged.
22. Service Connection shall mean the terminal end of the service line from the public water supply system. If the water meter is installed at the end of the service, then the service connection means the downstream end of the meter.
23. Tester shall mean any trained person/technician certified in the testing and repair of backflow prevention devices.
24. Vacuum shall mean the absolute pressure less than that exerted by the atmosphere.
25. Vacuum Breaker shall mean any device that permits entrance of air into the water supply distribution line to prevent back siphoning.
26. Water, Potable shall mean any water free from impurities in amounts sufficient to cause disease or harmful physiological effects. Its quality shall conform to KDHE requirements for public water supplies.

27. Water, Non potable shall mean water that is not safe for human consumption or that is of questionable quality for human consumption.

SECTION 2 – Cross Connection Control General Policy

A. Purpose. The purpose of this policy is:
   1. to protect the public water supply system from contamination.
   2. to promote the elimination, containment, isolation, or control of cross connections between the public water supply system and non-potable water systems or other systems which introduce or may introduce contaminants into the public water supply system of the consumer's water system.
   3. to provide for the maintenance of a continuing program of cross connection control which will prevent the contamination of the public water supply system.

B. Application. This regulation/ordinance shall apply to all consumers' water systems. The Agency shall also require cross connection control devices at the service connections of other KDHE permitted public water supply systems served by the Agency.

C. Intent. This policy will be reasonably interpreted by the Agency. It is the intent of Agency to recognize the varying degrees of hazard and to apply the principle that the degree of protection shall be commensurate with the degree of hazard.

   If, in the judgment of the Agency or its authorized representative, cross connection protection is required through either piping modification or device, due notice shall be given to the consumer. The consumer shall immediately comply by providing the required protection at his own expense. Failure or refusal or inability on the part of the consumer to provide such protection shall constitute grounds for the discontinuation of water service to the premises until such notice has been provided.

SECTION 3 – Cross Connections Prohibited

A. No water service connection shall be installed or maintained to any premises where actual or potential cross connections to the public water supply system may exist unless such actual or potential cross connections are abated or controlled to the satisfaction of the Agency or its authorized representative.

B. No connection shall be installed or maintained whereby an auxiliary water supply may enter a public water supply system.

SECTION 4 – Survey and Investigations

A. The consumer's premises shall be open to all reasonable times to the Agency or its authorized representative, for the conduction of surveys and investigation of water use practices within the consumers' premises to determine whether there are actual or potential cross connections in the consumer's water system.

B. On request by the Agency or its authorized representative, the consumer shall furnish requested information on the water use practices within his premises and the consumer's water system.

C. On request the Agency or its authorized representative, the consumer shall conduct periodic surveys of water use practices on the premises of the consumer's water system to determine whether there are actual or potential cross connections. The consumer shall provide the survey results to the Agency or its authorized representative.

SECTION 5 – Where Protection is Required

A. An approved backflow prevention device shall be installed on each service line to a consumer's water system serving premises where, in the judgment of the Agency or its authorized representative or the KDHE, actual or potential cross connections exist. The type and degree of protection required shall be commensurate with the degree of hazard and/or type of contamination that may enter the public water supply systems.

B. An approved air gap separation or reduced pressure principle backflow prevention device shall be installed at the service connection or within any premises where, in the judgment of the Agency or its authorized representative or the KDHE, the nature and extent of activities on the premises, or the materials used in connection with the activities, or materials stored on the premises, would present a health hazard or contamination of the public water supply system from cross connection. This includes but is not limited to the following situations:

1. Premises having an auxiliary water supply, unless the quality of the auxiliary supply in acceptable to the Agency or its authorized representative, or the KDHE.
2. Premises having internal plumbing arrangements which make it impractical to ascertain whether or not cross connections exist.
3. Premises where entry is restricted so that inspections for cross connections cannot be made with sufficient frequency or at sufficiently short notice to assure the cross connections do not exist.
4. Premises having repeated history of cross connections being established or reestablished.
5. Premises which due to the nature of the enterprise therein, are subject to recurring modification or expansion.
6. Premises on which any substance is handled under pressure so as to permit entry into the public water supply system, or where cross connections could be reasonably expected to occur. This shall include the handling of process waters and cooling waters.
7. Premises where toxic or hazardous materials are handled.

C. The following types of facilities fall into one or more of the categories or premises where an approved air gap separation or reduced pressure principle

backflow prevention device may be required by the Agency or its authorized representative or the KDHE to protect the public water supply and must be installed at these facilities unless all hazardous or potentially hazardous conditions have been eliminated or corrected by other methods to the satisfaction of the Agency or its authorized representative and the KDHE:

1. Agricultural Chemical facilities.
2. Auxiliary water systems or wells.
3. Boilers, Chill water systems, or Cooling towers.
4. Bulk water loading facilities.
5. Building Complexes: Hotels, Apartments, Public or private buildings, or other structures having actual or potential Cross Connections.
6. Car washing facilities.
7. Chemical manufacturing, handling, or processing plants.
8. Feedlots.
9. Fire protection systems.
10. Hazardous or Radiological Waste storage & disposal facilities.
11. Hospitals, Medical Centers, Morgues, Mortuaries, Autopsy facilities, Clinics, or Nursing and Convalescent homes.
12. Irrigation & sprinkling systems.
13. Laundry & dry cleaning facilities.
14. Meat processing facilities.
15. Metal manufacturing, cleaning, plating, processing, or fabricating plants.
16. Oil and gas production, storage, or transmission facilities.
17. Packing or food processing plants.
18. Paper & paper products plant.
19. Power Generation Plants.
20. Research Analytical, & College Laboratories.
21. Schools or Colleges.
22. Sewage and storm drainage facilities and reclaimed water systems.
23. Solar heating systems.
24. Veterinary Clinics.

SECTION 6 – Lawn Irrigation Systems

A. An approved pressure vacuum breaker or reduced pressure principle backflow prevention device shall be installed on all new law irrigation sprinkler systems.
B. All lawn sprinkler systems that have no backflow protection shall be so protected within 90 days from the date of the enactment of this ordinance or prior to usage, whichever is later.
C. All lawn sprinkler systems with improper backflow protection shall be retrofitted in accordance with paragraph A within one year from the date of the enactment.

SECTION 7 – Backflow Prevention Devices

A. Any backflow prevention device required by this regulation/ordinance shall be of a model or constriction approved by the Agency or its authorized representative and the KDHE.
    1. Air gap separation to be approved shall be at least twice the diameter of the supply pipe, measured vertically above the top rim of the vessel, but in no case less than one inch.
    2. Double check valve assemblies or reduce pressure principle backflow prevention devices shall appear on the current list of approved backflow prevention devices established by the KDHE, unless the device was installed at the time the regulation/ordinance was passed and complies with required inspection and maintenance.

SECTION 8 – Installation

A. Backflow prevention devices required by this policy shall be installed at a location and in a manner approved by the Agency or its authorized representative. All devices shall be installed at the expense of the water consumer, unless the Agency or its authorized representative agrees otherwise.
B. Backflow prevention devices installed at the service connection shall be located on the consumer's side of the water meter, as close to the meter as is reasonably practical and prior to any other connection.
C. Backflow prevention devices shall be conveniently accessible for maintenance and testing, protected from freezing and where no part of the device will be submerged or subject to flooding by any fluid. All devices shall be installed according to manufacturer's recommendations.

SECTION 9 – Inspection and Maintenance

A. The consumer is required by this regulation/ordinance to inspect, test, and overhaul backflow prevention devices in accordance with the following schedule or more often as determined by the Agency or its authorized representative.
    1. Air gap separation shall be inspected at the time of installation and at least monthly.
    2. Double check valve assemblies shall be inspected and tested for tightness at the time of installation and at least every twelve months thereafter. They shall be dismantled, inspected internally, cleaned and repaired whenever needed and at least every five years.
    3. Reduced pressure principle backflow devices shall be inspected and tested for tightness at the time of installation and at least every twelve months thereafter. They shall be dismantled, inspected internally, cleaned and repaired whenever needed and at least every five years.

B. Inspections, tests, and overhauls of backflow prevention devices shall be made at the expense of the consumer and shall be performed by an approved tester.
C. Whenever backflow prevention devices required by this policy are found to be defective, they shall be repaired or replaced without delay at the expense of the consumer.
D. The consumer must maintain a complete record of each backflow prevention device from purchase to retirement. This shall include a comprehensive listing that includes a record of all test, inspections, and repairs. All records of inspections, tests, repairs, and overhauls shall be provided within 30 days to the Agency or its authorized representative.
E. All backflow prevention devices shall have a tag showing the date of the last inspection, test or overhaul or other maintenance.
F. Backflow prevention devices shall not be bypassed, made inoperative, removed or otherwise made ineffective without specific authorization by the Agency or its authorized representative.

SECTION 10 – Violation and Penalties

A. The Agency or its authorized representative shall deny or discontinue the water service to any premises or any consumer wherein any backflow prevention device required by this policy is not installed, tested and maintained in a manner acceptable to the Agency or its authorized representative, or if it is found that the backflow prevention device has been removed or bypassed, or in an unprotected cross connections exists.
B. Water service to such premises shall not be restored until the consumer is in compliance with the cross connection regulation/ordinance to the satisfaction of the Agency or its authorized representative.

Devices

The following devices are recognized for cross connection control and backflow prevention by the Kansas Department of Health & Environment.

Air Gap

Gap must be two pipes diameters (in on instance less than one inch). Must be inspected annually. Satisfactory for any material. Whenever practical the control method of choice.

Reduced Pressure Principle Backflow Preventer

Contains two specifically designed, soft seated, independently active check valves with a reduced pressure zone (with relief valve) between the two checks. Shut off valves before and after the device. Satisfactory for most toxic materials. Significant pressure loss. (10 psi or more) Must be tested and inspected annually. Repaired as necessary.

Double Check Valve Assembly

Contains two soft seated independently acting check valves in series. Shut off valves before and after device. Adequate for non-toxic applications only. Minor pressure loss. Must be inspected and tested annually. Repaired as necessary.

Pressure Vacuum Breaker

Must be installed a minimum of 12 inches above highest point of usage. No back pressure, only back siphonage. Can operate under constant pressure. Shut off valve can be located beyond the vacuum breaker. Must in inspected and tested annually. Repaired as necessary.

Atmospheric Vacuum Breaker

Must be installed a minimum of 6 inches above highest point of usage. No back pressure, only back siphonage. Not for use under constant pressure. Shut off valve must be located ahead of vacuum breaker. Must be inspected annually and repaired as necessary.